

AMENDMENTS TO THE CLAIMS

This listing of claims replaces, without prejudice, all prior versions and listings of claims in the application:

1-18 (Canceled).

19 (Currently amended). A method of generating a magnetic field moving in at least one magnetic field plane located in a given medium in a pipe and in which the vector product of the intensity of the magnetic field by its natural displacement velocity creates stereochemical deformations in the molecules of said given medium, comprising the steps of:

providing a coil or a pair of coils and applying a time-varying current to said coil or pair of coils to generate ~~generating~~ a first magnetic field; and

providing a coil or a pair of coils and applying a time-varying current to said coil or pair of coils to generate a second magnetic field, wherein said first and second magnetic fields are placed in each magnetic field plane, the directions of said first and second magnetic fields subtending between them a predefined an angle greater than 0° and less than 180°; and

varying the amplitude of ~~at least one of~~ said first and second magnetic fields over time in such a manner that the resultant of said first and second magnetic fields is a magnetic field moving in said field plane having an amplitude which is variable over time and a direction moving at a variable angular velocity so as to obtain as high a gradient as possible of said vector product;

the said magnetic field plane not being parallel to the axis of the pipe.

20 (Canceled).

21 (Currently amended). A method of generating a magnetic field moving in at least one magnetic field plane located in a given medium and in which the vector product of the intensity of the magnetic field by its natural displacement velocity creates stereochemical deformations in the molecules of said given medium ~~according to claim 19, further~~ comprising the steps of:

providing a coil or a pair of coils and applying a current to said coil or pair of coils to generate said a first magnetic field;

providing a coil or a pair of coils and applying a current to said coil or pair of coils to generate said a second magnetic field, said first magnetic field and said second magnetic field placed in a magnetic field plane, the directions of said first and second magnetic fields subtending between them a predefined angle; and

varying the intensities and frequencies of said currents over time independently of one another in such a manner that the resultant of said first and second magnetic fields is a magnetic field moving in said field plane having an amplitude which is variable over time and a direction moving at a variable angular velocity.

22 (Currently amended). A method according to claim 19, ~~further comprising the steps of:~~

~~providing a coil or a pair of coils and applying a current to said coil or pair of coils to generate said first magnetic field; and~~

~~providing a coil or a pair of coils and applying a current to said coil or pair of coils to generate said second magnetic field; and~~

wherein said time-varying currents are ~~sinusoidal~~ currents of the same frequency but of different amplitudes, and shifted in phase by 90°.

23 (Previously presented). A method according to claim 19, ~~further comprising the steps of:~~

~~providing a coil or a pair of coils and applying a current to said coil or pair of coils to generate said first magnetic field; and~~

~~providing a coil or a pair of coils and applying a current to said coil or pair of coils to generate said second magnetic field; and~~

wherein said time-varying currents are ~~sinusoidal~~ currents of the same amplitude but of different frequencies.

24 (Currently amended). A method according to claim 19, ~~in which said given medium is a fluid flowing through a pipe~~, comprising the step of generating said first and second magnetic field by means disposed on the exterior of said pipe.

25 (Currently amended). A method according to claim 19 ~~24~~, in which said at least one magnetic field plane forms an angle of between 45° and 90° with the direction of flow of the fluid to be treated.

26 (Currently amended). A method according to claim 19, ~~in which said given medium is a fluid flowing through a pipe~~, comprising the step of generating said first and second magnetic field by means disposed inside said pipe.

27 (Canceled).

28 (Previously presented). A method according to claim 19, comprising the steps of generating first and second magnetic fields in several parallel magnetic field planes.

29 (Currently amended). A method according to claim ~~28~~ 19, comprising the step of generating a magnetic field of variable amplitude by means of a pair of coils having a core of a ferromagnetic substance to close the magnetic fields generated by said coils, said core optionally being U-shaped, in which case the magnetic field generated occurs in two parallel planes, or E-shaped in which case the magnetic field generated occurs in three parallel planes.

30 (Previously presented). A method according to claim 19, in which said given medium is a limestone water, the application of the magnetic field generated preventing the deposit of limestone incrustations on the walls of pipes, boilers, etc.

31 (Previously presented). A method according to claim 19, in which said given medium is a fuel for a heat engine, the application of the magnetic field generated enabling said fuel to enhance and improve combustion efficiency.

32-33 (Canceled).

34 (Currently amended). A method of creating stereochemical deformations in the molecules of a medium ~~according to claim 32~~, comprising the steps of:

providing a first coil or pair of coils;

generating ~~a said~~ first magnetic field by applying a first current to said first coil or pair of coils;

providing a second coil or pair of coils

generating a said second magnetic field lying in the same magnetic field plane as said first magnetic field and subtending with said first magnetic field a predefined angle by applying a second current to said second coil or pair of coils; and

varying the magnitudes or frequencies of said first and second currents in such a manner that they bear no relation to each other and the resultant of said first and second magnetic fields is a magnetic field moving in said field plane having an amplitude which is variable over time and having a direction moving at a variable angular velocity, so that said vector product varies over time;

wherein the magnetic field creates stereochemical deformations in the molecules of said medium in dependence on the vector product of the intensity of the magnetic field by its velocity.

35 (Currently amended). A method according to claim 34, comprising the step of applying periodic sinusoidal currents of the same frequency but different amplitudes and φ 90° apart in phase where $0^\circ < \varphi < 180^\circ$ as said first and second currents.

36 (Previously presented). A method according to claim 34, comprising the step of applying sinusoidal currents of the same amplitude but different frequencies as said first and second currents.

37 (Currently amended). A method according to claim ~~32~~ 34, wherein said medium is a fluid flowing through a pipe, comprising generating said first and second magnetic fields in a magnetic field plane that forms an angle of between 45° and 90° with the direction of flow of said fluid.

38 (Currently amended). A method ~~according to claim 19 wherein,~~ comprising the steps of:

generating a first magnetic field;

generating a second magnetic field, lying in the same magnetic field plane as said first magnetic field, said first magnetic field and said second magnetic field subtending between them a predefined angle ~~comprises generating said first and second magnetic fields~~ oblique to each other; and

varying the amplitude of at least one of said first and second magnetic fields over time in such a manner that the resultant of said first and second magnetic fields is a resultant magnetic field moving in said field plane having an amplitude which is variable over time and having a direction moving at a variable angular velocity, so that said vector product varies over time;

wherein the resultant magnetic field creates stereochemical deformations in the molecules of said medium in dependence on the vector product of the intensity of the magnetic field by its velocity.

39 (New). A method according to claim 21, in which said given medium is a fluid flowing through a pipe, comprising the step of generating said first and second magnetic field by means disposed on the exterior of said pipe.

40 (New). A method according to claim 21, in which said at least one magnetic field plane forms an angle of between 45° and 90° with the direction of flow of the fluid to be treated.

41 (New). A method according to claim 38, in which said given medium is a fluid flowing through a pipe, comprising the step of generating said first and second magnetic field by means disposed on the exterior of said pipe.

42 (New). A method according to claim 38, in which said at least one magnetic field plane forms an angle of between 45° and 90° with the direction of flow of the fluid to be treated.